



## *RevV<sup>2</sup>* System Installation



# Contents

<b>System Configuration and Settings</b>	<b>2</b>
<b>Product Features and Application</b>	<b>3-4</b>
<b>Product Dimensions and Specifications</b>	<b>5</b>
<b>Pre-Installation Check-list</b>	<b>6</b>
<b>Programming Instructions</b>	<b>7</b>
<b>Valve Installation</b>	<b>8</b>
<b>System Installation</b>	<b>9-15</b>
<b>Assembly Drawings and Parts List</b>	<b>16-17</b>
<b>Troubleshooting</b>	<b>18-20</b>
<b>Replacement Parts</b>	<b>21</b>
<b>Packing List</b>	<b>22-23</b>
<b>Warranty</b>	<b>24</b>
<b>Contact Information</b>	<b>25</b>

# System Configuration and Settings

Fill in the content below for future reference.

## Installer

Name: \_\_\_\_\_

Address: \_\_\_\_\_ City/State: \_\_\_\_\_

Phone: \_\_\_\_\_ Install Date: \_\_\_\_\_

## Softener System Configuration

Tank Size: Dia. \_\_\_\_\_ in, Height \_\_\_\_\_ in Resin Volume: \_\_\_\_\_ cu/ft. Brine Tank Capacity: ☐ 80L ☐ 100L ☐ 130L

Media: \_\_\_\_\_

Control Valve Model: \_\_\_\_\_ Serial Number: \_\_\_\_\_

DLFC Size: \_\_\_\_\_ BLFC Size: \_\_\_\_\_ Injector: \_\_\_\_\_

## Valve Programming

Mode: ☐ A-01 Meter Delay ☐ A-02 Meter Immediate ☐ A-03 Meter Delay ☐ A-04 Meter Immediate

**Note:** A-03 and A-04 modes are not applicable in the USA

## Water Conditions and Quality

Total Hardness: \_\_\_\_\_ grains Iron (Fe): \_\_\_\_\_ ppm Acid (pH): \_\_\_\_\_ TDS: \_\_\_\_\_ ppm

Pressure of Inlet Water: \_\_\_\_\_ PSI Other: \_\_\_\_\_

Water Source: ☐ Well Water ☐ City Water ☐ Other: \_\_\_\_\_

## Factory Default Settings

Parameter	Unit	Factory Default	Programmed Settings
Control Mode A-01 (02, 03, 04)	/	A-01	
Unit Mode HU01 (02, 03)	/	HU01	
Water Treatment Capacity (Meter type)	m <sup>3</sup>	80	
Operation Days (Time clock type, by days)	D	03	
Operation Hours (Time clock type, by hours)	H	20	
Regeneration Start-up Time	/	02:00	
Backwash Time	Min.	10	
Brine & Slow Rinse Time	Min.	60	
Brine Refill Time	Min.	05	
Fast Rinse Time	Min.	10	
Interval Regeneration Days	D	30	
Output Mode b-01 (02)	/	b-01	

2.56gpm drain line flow control, .30gpm brine line flow control and blue injectors are factory installed.

# Product Features and Application

## Primary Applications

Recommended for residential applications.

- Softening System
- Iron Removal System
- Ion Exchange Equipment
- Boiler Softening Water Treatment
- RO Pre-treatment

## Product Characteristics



### ● Reliable Design

The RevV2 uses hermetically sealed ceramic discs which are corrosion and abrasion resistant. Rotation of the upper disc aligns to the corresponding lower disc ports for Service, Backwash, Brine & Slow Rinse, Brine Refill and Fast Rinse modes.


### ● No Hard Water Bypass

No hard water bypass option is available upon request. Stocked valve is a hard water bypass with exception during backwash cycle, no hard water is allowed to bypass thru the valve.



### ● Manual Regeneration

Regeneration can be initiated manually after unlocking the keypad and pressing . You may also advance through each phase by pressing .

### ● Power Outage Indicator

If outage exceeds 3 days, the time of day indicator “” will flash 12:12. The current time of day needs to be re-set. All other set parameters remain stored in memory. The valve will continue to process from the point of the power outage.

### ● Lockout Function

Keypad will lock after 1 minute without use. In order to access the parameter changes press and hold  and  simultaneously for 3 seconds to unlock.

### ● LED Display Screen

The strips on the screen flash from bottom to top indicating service mode is activated.

### ● Automatic Regeneration Interval

Set maximum number of days between regenerations.

### ● Interval Backwashes

This is an optional setting for applications requiring more than 1 backwash.

### ● Interlock Function

The interlock function allows for one valve to be in regeneration while the other valves are in service, so multiple valves are running parallel or in series. Refer to Figure 3-9

### ● Remote Handling Input

This connector can receive an external signal to be used with a PLC or computer in order to control the valve. Refer to Figure 3-11

### ● Pressure Relief Output

The valve cuts off water to the drain line when it switches into regeneration (Same as signal output b-02) for water treatment systems where the inlet pressure rises too fast, which can damage the valve, Pressure Relief Output can be used. An application example is a deep well system where a booster pump has been installed on the inlet to increase the water feeding pressure. Refer to Figure 3-10

# Product Features and Application Continued

## ● Maximum Day Regeneration

When the valve reaches the maximum set days, even when maximum volume has not been reached, the valve forces a regeneration at the pre-programmed time of day.

## ● Regeneration Mode Options with Adjustable Phase Times

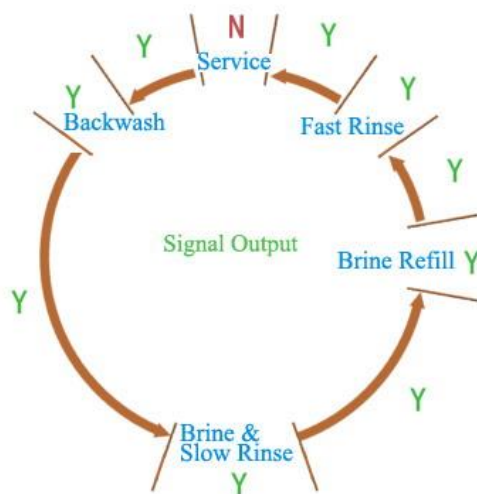
Mode	Name	Instruction
A-01	Meter Delayed	Regenerate on the day the available volume of treated water drops to zero (0). Regeneration starts at the regeneration time set.
A-02	Meter Immediate	Regenerate immediately when the available volume of treated water drops to zero (0).
A-03	Intelligent Meter Delayed <b>Not Applicable for U.S. Customers</b>	The valve calculates the system capacity; set the Resin Volume, Feed Water Hardness, and Regeneration Factor. Regeneration starts at the regeneration time set.
A-04	Intelligent Meter Immediate <b>Not Applicable for U.S. Customers</b>	Set the Resin Volume, Feed Water Hardness, and Regeneration Factor; the valve calculates the system capacity and regenerates when capacity is reached.

## ● Time Clock Regeneration Option

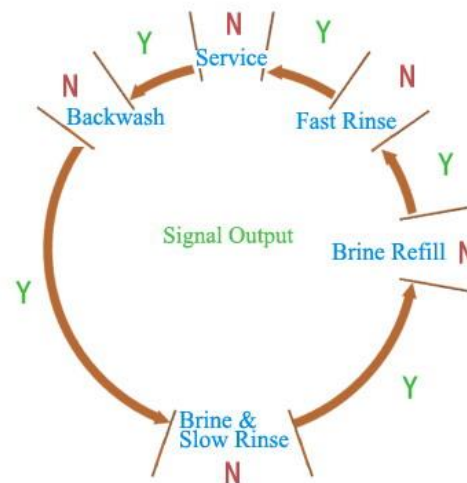
Adjust the maximum interval regeneration days to the number of days for regeneration.

## ● Signal Output

- \* There are two kinds of output modes:  
b-01 Mode: Signal turns on at start of regeneration and shuts off at end of regeneration.  
b-02 Mode: Signal available in intervals during regeneration cycles and during In Service.
- \* There is a signal output connector on the main control board for controlling external devices.  
Refer to Figure 3-1 to Figure 3-8.

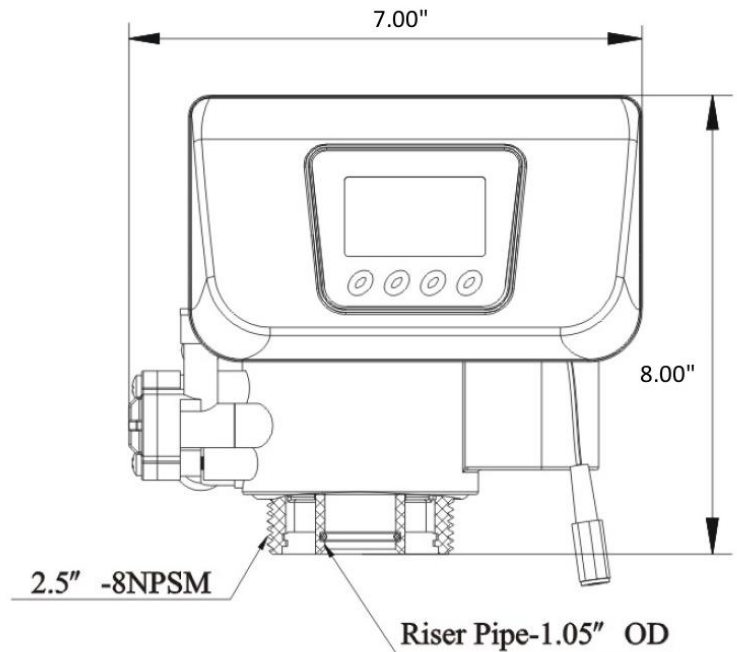
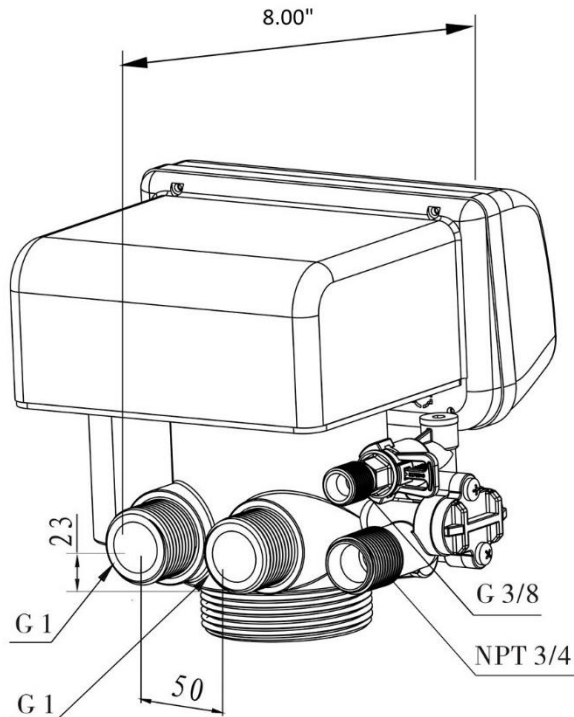


b-01



b-02

# Product Dimensions and Specifications



Model	Length(max)	Width(max)	Height (max)	Regeneration Mode
RevV2	8.0"	7.0"	8.0"	Down-flow
The valve dimensions are for reference only.				

Connect Port Dimensions							
Product Model	Inlet Port	Outlet Port	Drain Port	Brine Port	Base	Riser Pipe	Hard Water Bypass
RevV2-HW	1" NPT	1" NPT	1/2" NPT	3/8"	2.5"-8NPSM	1.05"	Yes
RevV2-NHW	1" NPT	1" NPT	1/2" NPT	3/8"	2.5"-8NPSM	1.05"	No
Main Technical Parameters							
Water Capacity	10 gpm (15psi Pressure Drop)						
Power Input	AC100~240V/50~60Hz						
Power Output	12VDC/1.5A						
Regeneration Sequence	Service → Backwash → Brine & Slow Rinse → Brine Refill → Fast Rinse.						
Regeneration Mode	<p><u>A-01 Meter Delay:</u> Regeneration happens when the capacity reaches zero and the preset time of regeneration is reached.</p> <p><u>A-02 Meter Immediate:</u> Regeneration happens when the capacity reaches zero.</p> <p><u>A-03 Intelligent Meter Delay:</u> The valve calculates the system capacity; set the Resin Volume, Feed Water Hardness, and Regeneration Factor. Regeneration starts at the regeneration time set.</p> <p><u>A-04 Intelligent Meter Immediate:</u> Set the Resin Volume, Feed Water Hardness, and Regeneration Factor; the valve calculates the system capacity and regenerates when capacity is reached.</p>						

# Pre-Installation Checklist

**Before installation, read through this manual thoroughly. Then obtain all materials and tools needed for installation.**

This softening system will operate at maximum efficiency when the following conditions are considered.

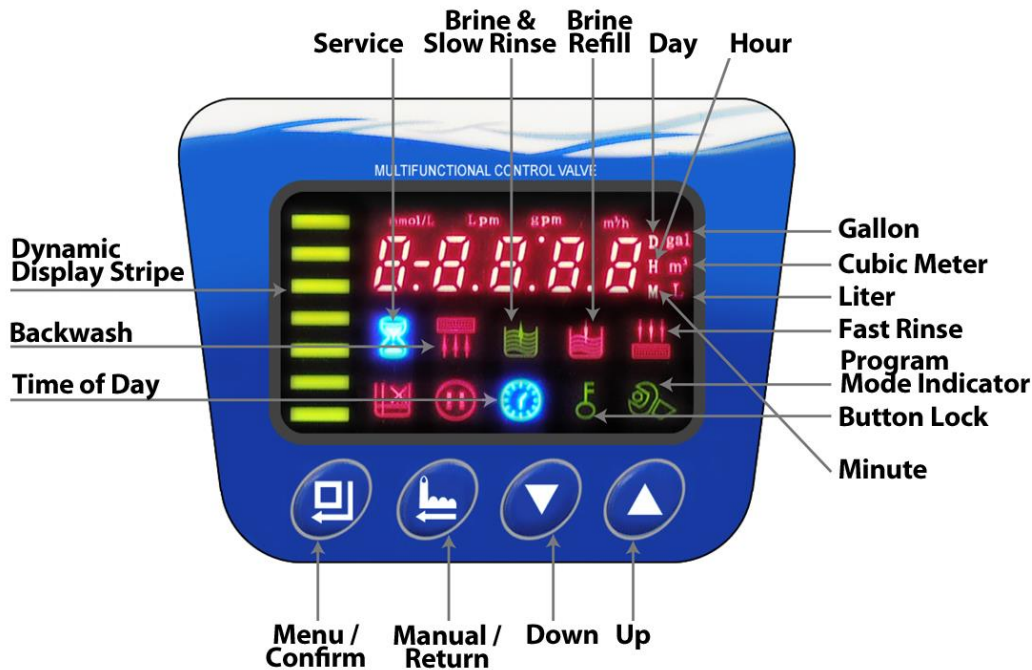
<b>Required Revv2 Operation Conditions:</b>		
Working Conditions	Working pressure	21psi to 120psi
	Water temperature	40 °F - 120 °F (5 °C - 50 °C)
Working Environment	Environment temperature	40 °F - 120 °F (5 °C - 50 °C)
	Relative humidity	≤ 95% (When temperature is 25 °C / 77 °F)
	Power source	AC100 ~ 240V / 50 ~ 60Hz
Inlet Water Quality	Turbidity	Down-flow regeneration < 5FTU
	Hardness	1 grain per gallon (gpg) = 17.1 parts per million (ppm)
	Chlorine	< 0.1ppm
	Iron <sup>2+</sup>	< 0.3ppm

- All plumbing and electrical work should be performed by an accredited professional to ensure all local, state, and municipal guidelines are met.
- Do not use the control valve with water that is unsafe or of unknown quality.
- Do not use the brine tube, injector body, or other connectors on the RevV2 valve as a handle to carry the system.
- Ensure there is salt in the brine tank at all times when this valve is used for softening. The brine tank should contain clean water softening salts only, at least 99.5% pure. Do not use small grain salt.
- When there is moderate to high turbidity, a filter should be installed before the water softening system on the inlet side.
- If the water pressure exceeds 120psi, a pressure reducing valve must be installed before the water inlet. If the water pressure exceeds 80 psi, installing a pressure reducing valve before the water inlet is highly recommended. If the water pressure is under 21psi, a booster pump must be installed before the water inlet.
- Replacement parts for the RevV2 valve should only be purchased through Hanksraft H2O Products resellers. Electrical components such as transformers are specific to the RevV2 valve from Hanksraft.
- Regular interval monitoring of the water quality and work environment is recommended to insure proper operation of the valve and system.

**\*\*\*Failure to use this product within the described conditions may void the warranty\*\*\***



# Programming



## ● Programming Key

- **Time of Day Indicator** 🕒
  - \* 🕒 LED, displays the time of day.
  - \* 🕒 LED flashes, reset the time of day after electrical service has been interrupted for 3 days or more.
- **Button Lock Indicator** 🔒
  - \* 🔒 LED on, indicates the buttons are locked.
  - \* To unlock, press and hold both ▲ and ▼ buttons simultaneously for 5 seconds until the 🔒 LED turns off.
- **Program Mode Indicator** ⚙️
  - \* ⚙️ LED on, enter program display mode. Use ▲ or ▼ buttons to view all values.
  - \* ⚙️ LED Flashes, enter program set mode. Press ▲ or ▼ buttons to adjust values.
- **Menu/Confirm Button** ⏏
  - \* Press ⏏, the ⚙️ LED turns on; enter program display mode, press ▲ or ▼ to view all values.
  - \* In program display mode, press ⏏, the ⚙️ LED flashes; enter program set mode and press ▲ or ▼ to adjust the values.
  - \* Press ⏏ after all program features are set.
- **Manual /Return Button** ⏮
  - \* Press the ⏮ button in any status and the valve will proceed to the next step. (Example: Press the ⏮ button while the valve is in Service status and it will start a manual regeneration. Press the ⏮ button while in Backwash status and the valve will go to Brine & Slow Rinse instantly.)
  - \* Press the ⏮ button in program display mode and it will return to In Service.
  - \* Press the ⏮ button in program set mode and it will return to program display mode.
  - \* Press the ⏮ while adjusting the value and it will return to program display mode directly without saving value.
- **Down ▼ and Up ▲ Buttons**
  - \* In program display mode press ▲ or ▼ buttons to view all values.
  - \* In program set mode press ▲ or ▼ buttons to adjust values.
  - \* Press and hold both ▲ and ▼ buttons simultaneously for 5 seconds to unlock the programming functions.



# Valve Installation

## ➤ Installation Notice

- Before installation, read through this manual thoroughly and obtain all materials and tools needed for installation.
- All plumbing and electrical work should be performed by an accredited professional to ensure all local, state, and municipal guidelines are met.

## ➤ Unit Location

- The filter or softener should be located close to a floor drain away from direct sunlight and any heat sources.
- Ensure the unit is installed with enough space for operation and maintenance.
- The installation surface should be clean and level.
- Install the unit in an environment which minimizes consumer impact in the event of malfunction.
- Brine tank should be installed close to the RevV2 control valve.

## ➤ Control Valve Installation

- 1.05" riser pipe with bottom basket is inserted into the center of the mineral tank.
- Install Valve Base O-ring around the neck of the valve.
- Lubricate the center hub O-ring of the RevV2 valve.
- Install the top basket with a twist and lock action to center hub of the RevV2 valve.
- Place RevV2 valve onto tank with the distributor tube inserted down the middle of the basket. Rotate clockwise to secure onto the tank.

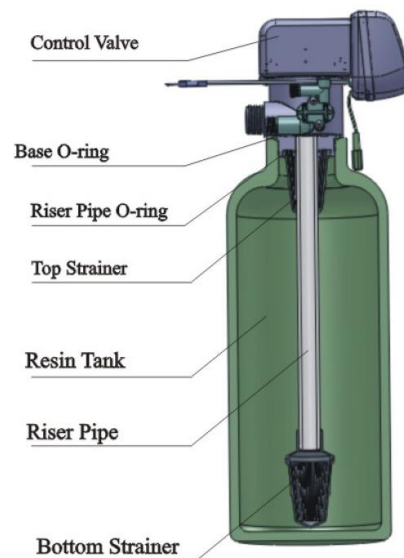


Figure 1-1

## ➤ Bypass Installation

**Note:** Before attaching the bypass to the valve, verify meter is installed in outlet side of the bypass with the propeller facing in.

- As Figure 1-2 shows; install the seals into the animated connector.
- Attach animated connectors to the inlet/outlet and grease the O-rings.
- Attach the bypass valve and insert the clips.
- Meter cable is installed into cable port on the outlet side during system start-up, see page 12.



Figure 1-2

# System Installation

## ➤ Plumbing Connections

- As Figure 1-3 shows; connect inlet pipe with inlet connector of bypass via 1" NPT female connector. Connect outlet pipe with outlet pipe of bypass via 1" NPT female connector.

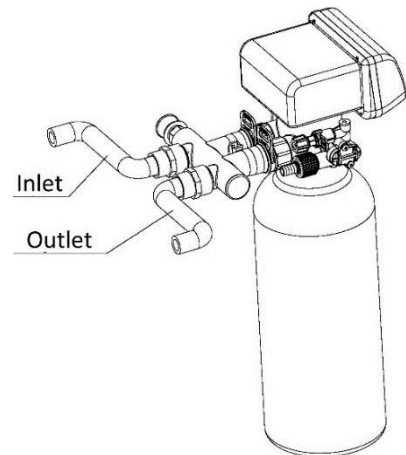


Figure 1-3

## ➤ Drainline Installation

- As Figure 1-4 shows; install drain line with an air gap to the floor drain.



An air gap is required between the drainline and the drain (sewer). This avoids a syphon effect and reverse contamination.

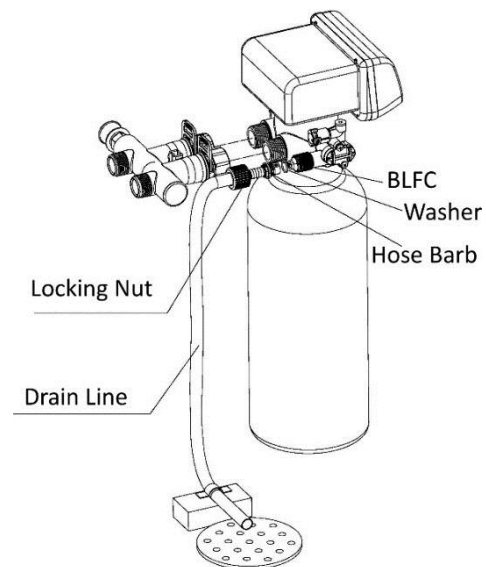


Figure 1- 4

## ➤ Brineline Connection

- As Figure 1-5 shows; slide brine nut onto the 3/8" brine tubing.
- Install the filter screen into the ferrule and insert the ferrule into the end of brine tube.
- Insert tube into brine connector and secure brine nut to the brine connector.

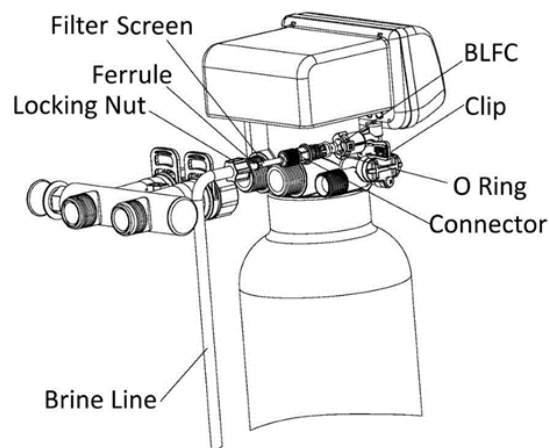


Figure 1-5

# System Installation Continued

## ➤ Brine Tank Installation

- Remove cap from brine well. Remove overflow nut and float.
  - Adjust float to the proper salt line. Use a twist and pull action to slide upper rubber stopper to desired position.  
Note: Hold float rod securely to not pull from air check assembly.  
Repeat with lower rubber stopper to secure float in position.  
Refer to Figure 1-8.
  - \* 9x48 to white tape or above
  - \* 10x44 to blue tape or above
  - \* 10x54 to blue tape or above
  - \* 12x52 to green tape or above
- Secure brine well to brine tank with the overflow elbow and nut using the lower hole.  
Refer to Figure 1-7.
  - Replace brine float into brine well.
  - Insert brine line tubing through the upper hole of tank and well.  
Refer to Figure 1-6.
  - Slide brine line nut onto brine line, insert line into well, and secure nut to well.
  - Replace brine well cap.
  - Attach a drain tube to the overflow elbow. Maintain an air gap between the tube and floor drain.



Figure 1-6



Figure 1-7

Drain Overflow Elbow

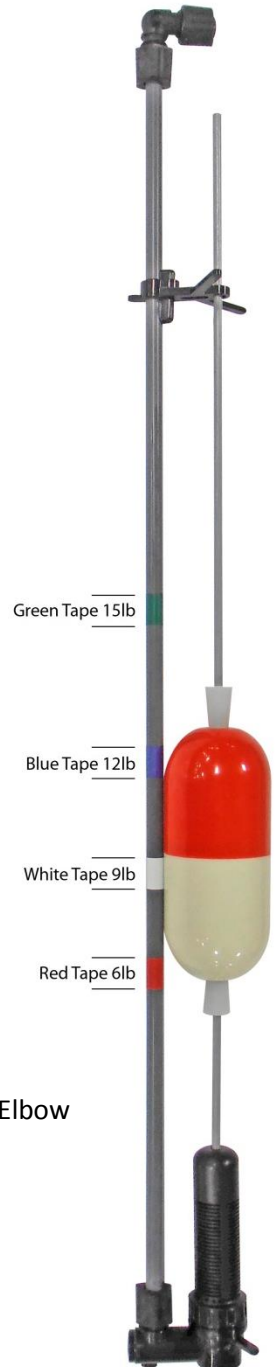
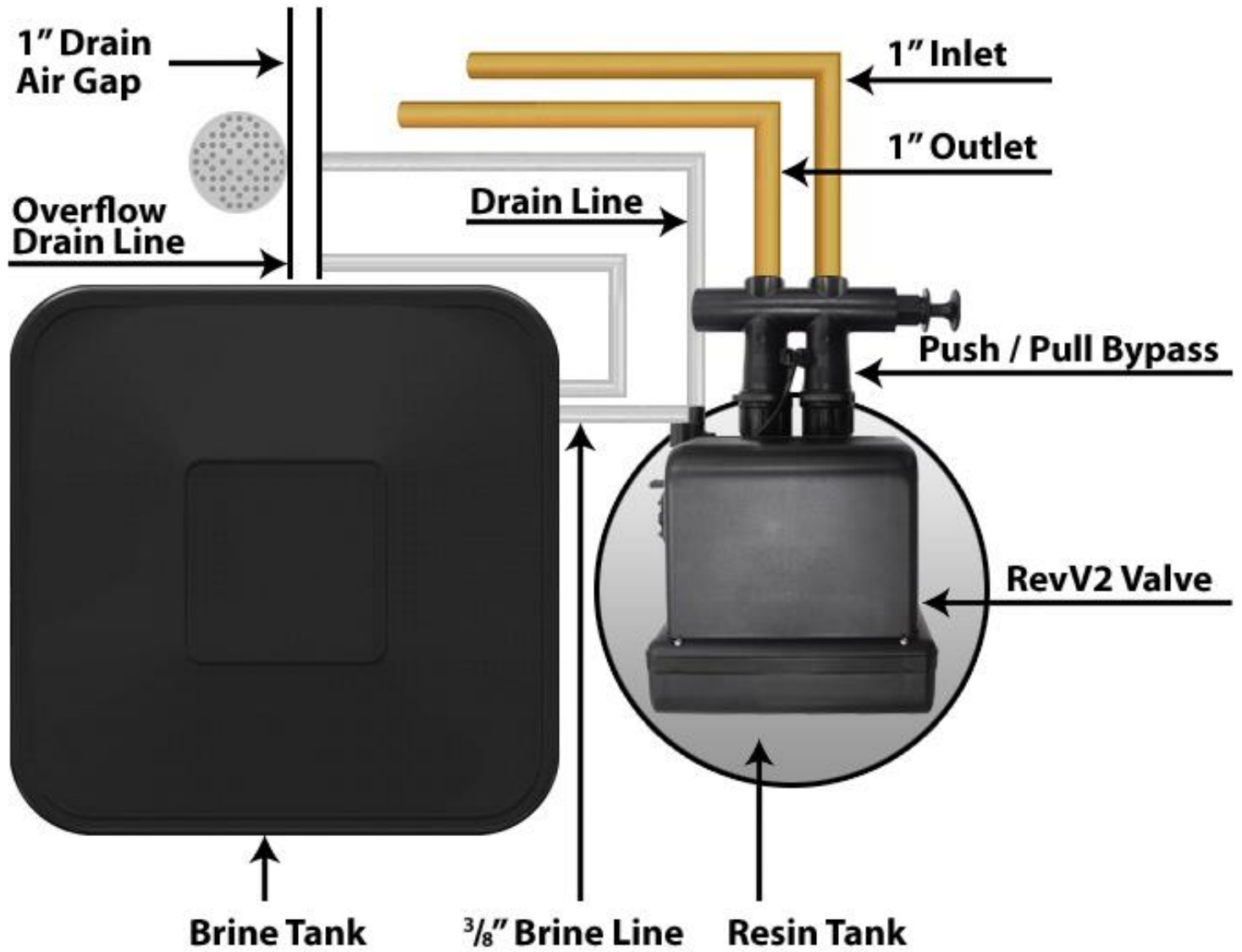


Figure 1-8

# System Installation Continued

## ➤ System Installation Chart



# System Installation Continued

## ➤ System Start-up

- Before running the RevV2 for the first time, flush out the water line and bypass. Be sure the bypass is closed.
- Turn the water source on at the inlet to the house.
- Disconnect the bypass from the RevV2 valve if attached to the valve.
- Be sure to remove the meter impeller from the bypass before opening the bypass.
- Put a container under the bypass and open the bypass to allow water to flow through and remove any foreign material out of the water lines.
- Close the bypass.
- Reinstall the meter impeller in the outlet side with the impeller facing in and re-connect the bypass to the valve.
- Open the bypass.
- Check for any leaks.
- Insert meter cable in the outlet side of the bypass or connector, the side the impeller is installed in.
- Plug in the power cord for the valve.
- Open a water line and let water flow until water runs clear.
- Press and hold both ▲ and ▼ buttons simultaneously for 3 seconds to unlock the key pad.
- Press ⏮ to advance to 2 - Backwash; this lets air out of the drain line. Verify the air check valve is closed by listening to be sure no air is being drawn into the system. Process will take 8-10 minutes to purge the system.  
**Note:** when you press ⏮ the screen will display “-00-” as it positions the ceramic discs. Once “-00-” disappears and the next phase is displayed, you can press ⏮ to advance to the next phase.
- Press ⏮ to manually advance through the next phase, 3 - Brine & Slow Rinse. Verify the air check valve is closed by listening to be sure no air is being drawn into the system. Press ⏮ to manually advance to the next phase, 4 - Brine Refill. This phase will fill the brine tank with the correct amount of water. Allow the brine refill phase to run, do not advance past this phase. Should take about 10 minutes for a 1 cu/ft. system. After this phase has completed, press ⏮ to manually advance to 5 - Fast Rinse and again to advance to the Service position.
- Next add salt to the brine tank. (40lb minimum, 120lb maximum)  
**Note:** We recommend using pellet salt, NOT solar salt.
- Install brine tank cover.
- Turn a faucet on, away from the installation location, until the water from the plumbing lines has been purged.
- Softening system is now fully operational.
- Take a water sample to verify and test for hardness reduction.

# System Installation Continued

## ➤ Sanitizing Procedure

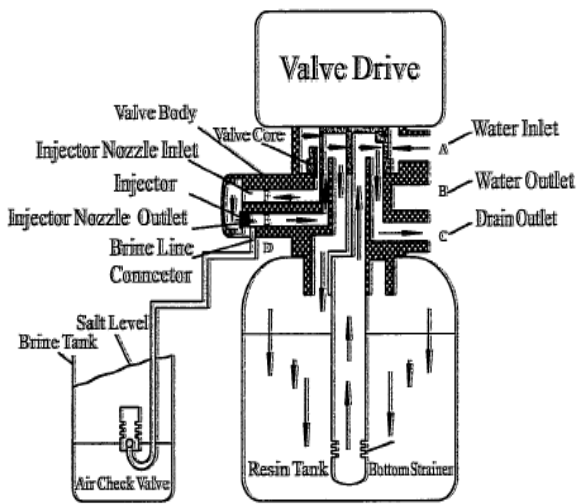
At the start up or after a period of one week the following procedure is recommended to remove the possibility of bacterial growth or contamination within the system. This procedure relates only to the original description of equipment and options described for this system. Any alterations to the configuration would require evaluation by a trained water professional.

- Remove the brine tank cover and locate the brine well.
- Remove the brine well cap.
- Pour 1/3 cup of unscented bleach into the brine well.
- Place cap back on brine well and cover back on brine tank.
- The system must be regenerated. Select an immediate regeneration or a delayed regeneration.
  - a) Immediate Regeneration: At the control valve, press ▲ and ▼ and hold for 3 seconds to unlock the valve. Press ↵ to start an immediate regeneration. Allow approximately 2 hours for the valve to complete its regeneration cycle and to return to service mode.
  - b) Delayed Regeneration: At the control valve, press ⏸ and hold for 3 seconds to set a delayed regeneration that very next morning at the programmed time. (Default setting is 2:00am)



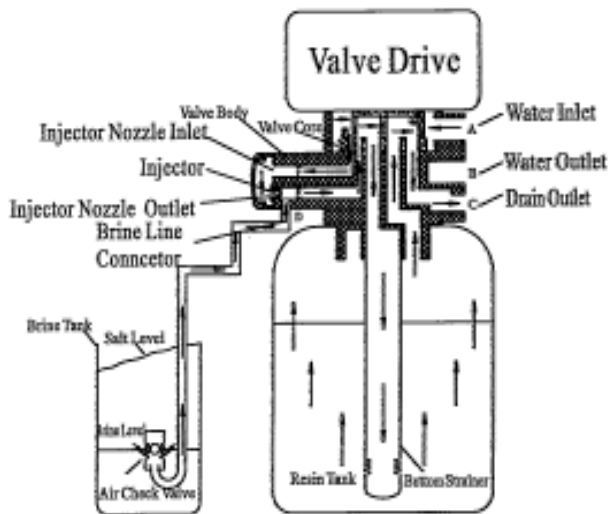
# System Installation Continued

## ➤ Water Flow Diagram



### Service Position

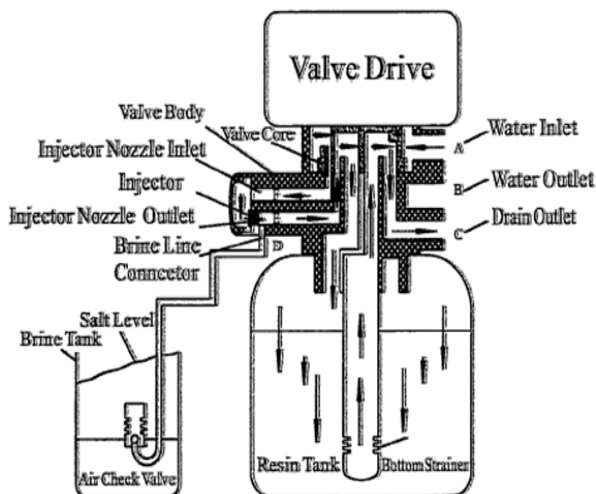
Raw water enters into the control valve from water inlet A, from the top of valve core and into the tank from top distributor. The water moves down through the resin layers, through bottom strainer, up through the riser tube, through the valve core, and then flows out of water outlet B.



### Backwash Position

Set to 0 for standard softeners and skipped.

Raw water enters into the control valve from water inlet A, through valve body from the top of valve core, then from the bottom of tank through the riser tube, into the valve core, and finally flows out of drain outlet C.

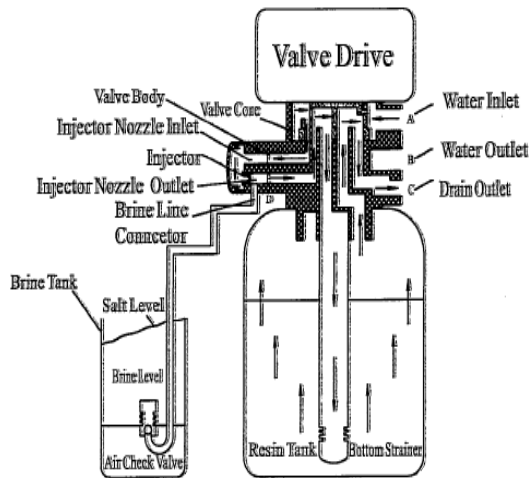


### Brine Draw Position

Raw water enters into control valve from water inlet A, through valve core into injector inlet F, into the injector outlet E. This produces negative pressure so the brine is drawn into the valve. Water flow then goes into the riser pipe, through the bottom strainer into the tank, up through resin layer, valve core, and then flows out drain outlet C.

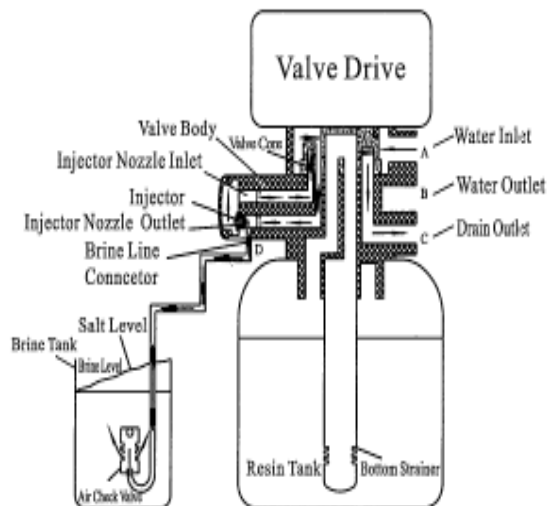


# System Installation Continued



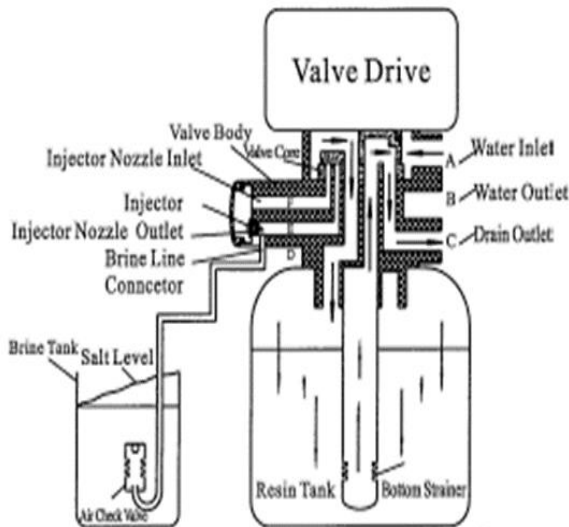
## Slow Rinse Position

After absorbing all salt, raw water enters into control valve through water inlet A, through valve core into the injector nozzle, passes through the injector nozzle down to riser pipe, through bottom strainer, into the valve body, up through resin layer, into valve body, valve core, and flows out of drain outlet C.



## Brine Refill Position

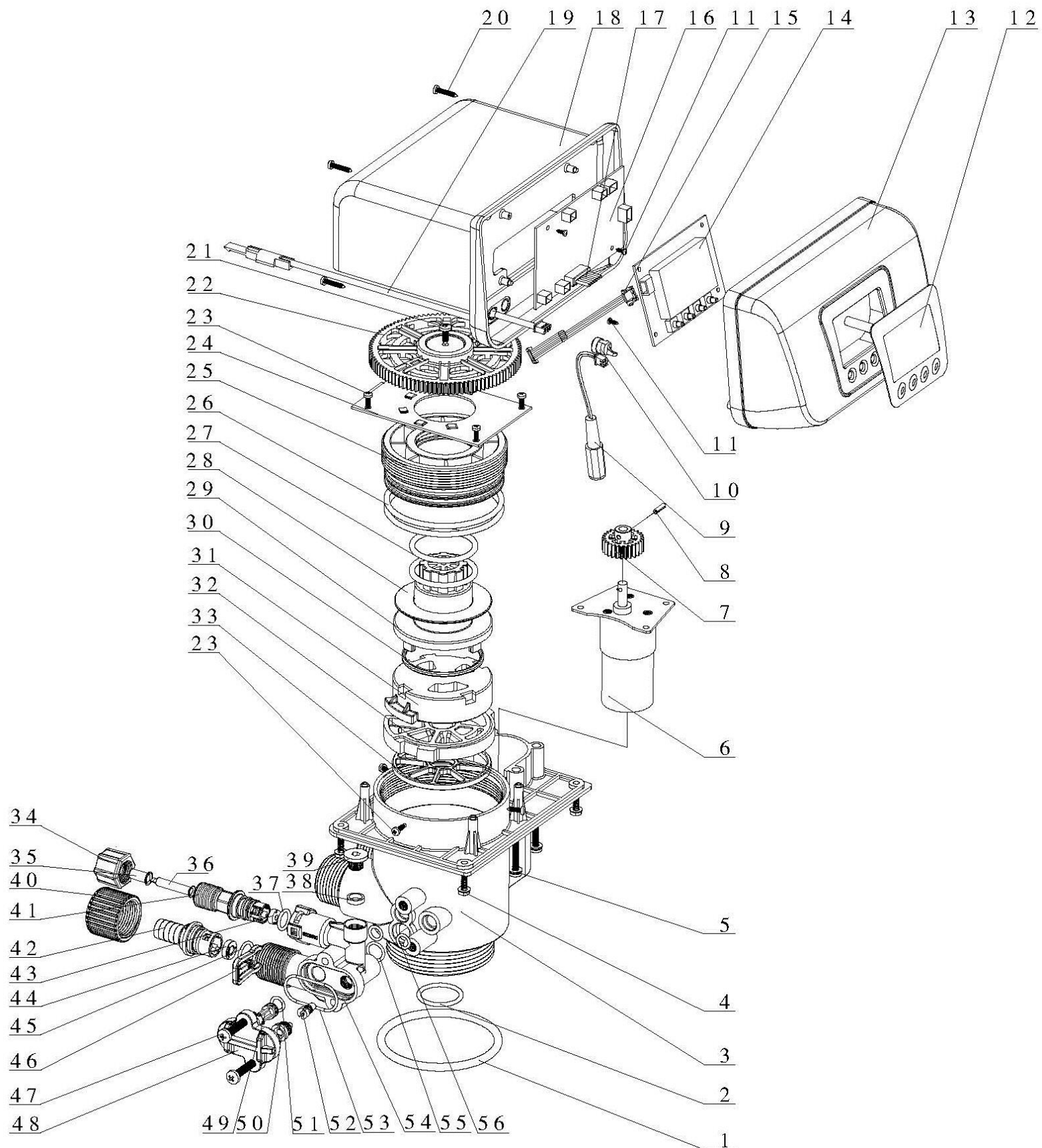
Raw water enters into the valve from water inlet A, through the valve core to injector outlet E, into brine line connector D, and fills the brine tank. A small amount of water passes through injector outlet E to injector inlet F from the valve core, and flows out of drain outlet C.



## Fast Rinse Position

Raw water enters into the control valve from water inlet A, through the top of the valve core, into the tank from the top, down through the resin layers, through the riser pipe from bottom strainer, up through valve core and flows out to drain outlet C.

# Assembly and Parts



# Assembly and Parts Continued

Item No.	Description	Quantity	Item No.	Description	Quantity
1	Valve Body O-ring 73 × 5.3	1	29	Shaft	1
2	Inner D-tube O-ring 25.8 × 2.65	1	30	Moving Seal Ring	1
3	Valve Body (ABS + GF10)	1	31	Moving Disk	1
	Valve Body (ABS + GF20)	1	32	Fixed Disk	1
4	Screw, Cross ST 3.9 × 16	4	33	Seal Ring	1
5	Screw, Cross M 4 × 30	4	34	Hexagonal Nut	1
6	Motor	1	35	Tube	1
7	Small Gear	1	36	Net	1
8	Pin	1	37	O-ring 11X2	1
9	Wire for Power	1	38	Seal Ring	1
10	Cable Clip	2	39	Plug	1
11	Screw, Cross ST2.2X6.5	4	40	Animated connector	1
12	Label	1	41	Connector	1
13	Front Cover	1	42	Connector	1
14	Display Board	1	43	Brine Line Flow Control	1
15	Wire for Display Board	1	44	Drain Line Flow Control	1
16	Control Board	1	45	O-ring 15X1.8	1
17	Wire for Locating Board	1	46	Clip	1
18	Dust Cover	1	47	Screw, Cross M5X35	2
19	Probe wire	1	48	Injector Cover	1
20	Screw, Cross ST2.9X16	3	49	Filter net	1
21	Screw, Cross ST3.9X13	1	50	Nozzle, Injector	1
22	Big Gear, Driven	1	51	O-ring 8X1.8	1
23	Screw, Cross ST2.9X9.5	7	52	Throat, Injector	1
24	Locating Board	1	53	O-ring 30X1.8	1
25	Fitting Nut	1	54	Injector Body	1
26	O-ring 73X3.55	2	55	O-ring 7.5X1.8	2
27	O-ring 37.7X3.55	2	56	O-ring 10.82X1.78	1
28	Anti-friction Washer	1			

# Troubleshooting

## ➤ Control Valve

Problem	Cause	Correction
1. Softener fails to regenerate	A. Electrical service to unit has been interrupted. B. Regeneration cycles set incorrectly. C. Controller is defective. D. Motor failure.	A. Check for consistent electrical service. B. Reset regeneration cycles. C. Replace controller. D. Replace motor.
2. Regeneration time is not correct	A. Time of Day not set correctly. B. Power failure over 3 days.	Check program and reset time of day.
3. Hard water	A. Bypass valve is open or leaking. B. No salt in brine tank.  C. Injector plugged. D. Insufficient water level in brine tank. E. Leak at O-ring on riser pipe.  F. Internal valve leak. G. Regeneration cycles not correct. H. Shortage of resin. I. Bad quality of feed water or meter blocked.	A. Close or repair bypass valve. B. Add salt to brine tank and maintain salt level above water level. C. Change or clean injector. D. Check brine tank refill time. E. Make sure riser pipe is not cracked. Check O-ring and tube pilot. F. Change valve body. G. Set correct regeneration cycles in the program. H. Add resin to mineral tank and check for leaks. I. Reduce the inlet turbidity, clean or replace meter.
4. Softener fails to draw brine	A. Line pressure is too low. B. Brine line is plugged. C. Brine line is leaking. D. Injector is plugged. E. Internal leakage. F. Drain line is plugged. G. Wrong BLFC, DLFC and injector.	A. Increase line pressure. B. Clean brine line. C. Replace brine line. D. Clean or replace injector. E. Replace valve body. F. Clean drain line flow control. G. Install properly sized BLFC, DLFC & injector.
5. Unit uses too much salt	A. Improper salt setting. (Brine refill time) B. Excessive water in brine tank.	A. Check salt usage and salt setting (brine refill time). B. See problem no.6.
6. Excessive water in brine tank	A. Brine refill time is too long. B. Foreign material in brine line. C. Foreign material in brine valve or plugged drain line flow control. D. Power outage during brine fill.  E. Safety valve in brine tank malfunction.	A. Reset correct refilling time. B. Clean brine line. C. Clean brine valve, and DLFC.  D. Put the valve in bypass. Install a safety float in brine tank. E. Repair or replace brine safety valve.
7. Pressure lost or iron in conditioned water	A. Iron in the water supply pipes. B. Iron mass in the softener.  C. Fouled resin bed.  D. Too much iron in the raw water.	A. Clean the water supply pipe. B. Clean valve and add resin cleaning chemical, increase frequency of regeneration. C. Check backwash, brine draw and brine tank refill. Increase frequency of regeneration and backwash time. D. Install Iron removal equipment before softening.
8. Loss of mineral through drain line	A. Air in water system. B. Bottom strainer broken. C. Improperly sized drain line control (DLFC).	A. Assure that well system has proper air eliminator control. B. Replace bottom strainer. C. Check for proper drain rate.

# Troubleshooting Continued

Problem	Cause	Correction
9. Control cycles continuously	<ul style="list-style-type: none"> <li>A. Signal to the locating PCB is interrupted.</li> <li>B. Controller is faulty.</li> <li>C. Foreign material in the drive gear.</li> <li>D. Time of regeneration steps were set to zero.</li> </ul>	<ul style="list-style-type: none"> <li>A. Check the connection between the main PCB to the locating PCB.</li> <li>B. Replace controller.</li> <li>C. Remove blockage in drive gear.</li> <li>D. Check program setting and reset.</li> </ul>
10. Drain flows continuously	<ul style="list-style-type: none"> <li>A. Internal valve leak.</li> <li>B. Interrupted power supply during backwash.</li> </ul>	<ul style="list-style-type: none"> <li>A. Check and repair valve body or replace it.</li> <li>B. Adjust valve to service position or turn off bypass valve and restart when power is restored.</li> </ul>
11. Interrupted or irregular brine	<ul style="list-style-type: none"> <li>A. Water pressure too low or not stable.</li> <li>B. Injector is plugged or faulty.</li> <li>C. Air in resin tank.</li> </ul>	<ul style="list-style-type: none"> <li>A. Increase water pressure.</li> <li>B. Clean or replace injector.</li> <li>C. Check and find the reason.</li> </ul>
12. Water flows from drain or brine line after regeneration	<ul style="list-style-type: none"> <li>A. Foreign material in the valve body.</li> <li>B. Hard water mixed in valve body.</li> <li>C. Water pressure is too high.</li> </ul>	<ul style="list-style-type: none"> <li>A. Clean foreign material in valve body.</li> <li>B. Change valve core or sealing ring.</li> <li>C. Reduce water pressure or use pressure release function.</li> </ul>
13. High concentration of brine	<ul style="list-style-type: none"> <li>A. Foreign material in injector.</li> <li>B. Brine valve cannot be shut-off.</li> <li>C. Rapid rinse time is too short.</li> </ul>	<ul style="list-style-type: none"> <li>A. Clean and repair injector.</li> <li>B. Replace brine valve or clean it.</li> <li>C. Extend rapid rinse time.</li> </ul>
14. Decreased Capacity	<ul style="list-style-type: none"> <li>A. Regeneration is not occurring.</li> <li>B. Fouled resin bed.</li> <li>C. Safety float is not at the proper height or brine time is low.</li> <li>D. Softener setting not proper.</li> <li>E. Raw water quality has altered.</li> <li>F. Flow meter is slow or stationary.</li> </ul>	<ul style="list-style-type: none"> <li>A. Reset regeneration parameters.</li> <li>B. Increase backwash flow rate and time, clean or change resin.</li> <li>C. Readjust brine draw time and adjust float height.</li> <li>D. Re-test the water and change the valve parameters.</li> <li>E. Regenerate unit manually then reset regeneration cycle.</li> <li>F. Disassemble and clean flow meter or replace.</li> </ul>
15. Power Outage Occurs During Regeneration	<ul style="list-style-type: none"> <li>A. System locked in current phase/cycle.</li> </ul>	<ul style="list-style-type: none"> <li>A. Close the bypass until power resumes. If power outage last over 72 hours, the time of day will need to be reset.</li> </ul>

# Troubleshooting Continued

## ➤ Electronics

Problem	Cause	Correction
1. Abnormal display	A. Wiring to the front panel is loose. B. Control board is faulty. C. Transformer malfunction. D. Electrical service unstable.	A. Check and replace the wiring. B. Replace control board. C. Check and replace transformer. D. Verify power source.
2. Blank display	A. Wiring to the front panel is loose. B. Front panel damaged. C. Control board damaged. D. Electricity is interrupted.	A. Check and replace wiring. B. Replace front panel. C. Replace control board. D. Check power source.
3. E1 code	A. Wiring of locating board with controller fails to work. B. Locating board damaged. C. Mechanical drive failure. D. Faulty control board. E. Wiring to the motor has a short. F. Motor damaged.	A. Replace wiring. B. Replace locating board. C. Replace Discs or drive gear. D. Replace control board. E. Replace wiring. F. Replace motor.
4. E2 code	A. Hall effect on locating board damaged. B. Possible short in the wiring to the locating board. C. Control board is malfunction	A. Replace locating board. B. Replace wiring. C. Replace control board.
5. E3 or E4 code	A. Control board malfunction	A. Replace control board.



# Replacement Parts

## ➤ Replacement Parts

Description	Part Number	Quantity
Transformer, 12VDC	6379021	1 EA
Upper Distributor Basket	116044H	1 EA
Bypass Clips	8270004	1 EA
Drain Assembly Kit - #40, #42, #45, #46	REVV-216	1 KIT
DLFC Buttons, BLFC Buttons, & Injector Kit with plugs	REVV-215B	1 KIT
Brine Assembly Kit, 3/8" - #34, #35, #36, #37, #41	REVV-217	1 KIT
Brine Screen and Tube - #35, #36	REVV-218	1 EA
Locating Board Kit - #17, #23, #24	REVV-228	1 KIT
Display Board Kit - #11, #14, #15	REVV-226	1 KIT
Meter Cable Assembly Kit - #10, #19	REVV-232B	1 KIT
Motor - #6	6158012	1 EA
O-ring, Valve Center Hub - #2	8378078	1 EA
O-ring, Valve Body - #1	8378143	1 EA
Injector Cover O-ring - #53	8378025	1 EA
Injector Filter Screen Kit - #49, #51	REVV-219	1 KIT
Injector Body Assembly Kit - #34 - 56	REVV-220B	1 KIT



# Packing List

## ➤ Valve Packing List

Description	Part Number	Figure	Quantity
Control Valve	F63-C3		1
12V DC Transformer	6379021		1
User Manual			1
<b>Parts</b>			
Valve Base O-ring	8378143		1
Interlock Cable	5515002		1
Washers	8371001		2
Filter Screen & Bushing	8336008 / 8457039		1 Set
3/8" Brine Nut	8940001		1
<b>Injector and Button Kits – REV215B</b>			
Injector Nozzle, Throat & Plug (plugs not pictured)	6301, 6302, 6303, 6304, 6305, 6306, 6307, 6308, 6309, 6310		1 Set
Drain Line Flow Controls	8468042      8468043 8468044      8468045 8468060      8468061 8468062      8468063		1 Set
Brine Line Flow Controls	8468052      8468053 8468054      8468055 8468056      8468057		1 Set

# Packing List Continued

## ➤ System Packing List

Description	Part Number	Quantity
RevV2 Control Valve	F63-C3	1
1" Push Pull Bypass	41204B	1
Pressure Tank and Media (media may be installed in tank or bulk separate)	Varies with system size	1
Distributor Tube and Lower Basket (installed in pressure tank)	Varies with system size	1
Upper Basket	116044H	1
Brine Tank and Float Assembly	Varies with system size	1
3/8" Brine Line	BL3/8	4'
Customer Manual	---	1
Warranty Card	---	1

# Warranty

## ➤ Limited Warranty

As described herein, Hankscraft Inc., d/b/a H2O Products (“Hankscraft”), warrants its’ products are free from defects in material and workmanship only, when properly installed, operated, and maintained. This warranty is subject to the exceptions herein.

Hankscraft warrants to the original owner that the items listed below will be free from defects in materials and workmanship for the period of time specified below from the original purchase date.

- Control valve and all internal valve parts and the salt storage tank – FIVE YEARS
- Mineral tank – TEN YEARS
- Any other component – ONE YEAR

Mineral tank media/resin is not warrantied.

Any parts used for replacement are warrantied for the remainder of the original warranty period applicable to the part from the date of manufacture.

Hankscraft’s obligation by this Limited Warranty, at its option, is to repair or replace any warrantied product only. Prior to returning the product to Hankscraft, a valid return materials authorization number must be obtained from Hankscraft. Any product returned to Hankscraft without a valid return authorization number will be rejected. Any product found to be defective will, at the sole discretion of Hankscraft, be repaired or replaced. Hankscraft is not responsible for shipping cost to the repair facility. This section lists the sole remedies for any valid warranty claim.

This warranty does not apply to defects reported to Hankscraft outside of the warranty period.

This warranty does not apply to defects caused by installing, operating, servicing, modifying, repairing or maintaining (or lack of maintaining) the product outside of Hankscraft’s recommendations. This warranty does not apply to defects caused by damage during shipment, neglect, misuse, modification, accident, noncompliance with local codes and ordinances, hot water, frozen water, sediment, corrosive liquids, gases, chemicals, bacteria, animals, sand, salt, flood, wind, fire, outdoor installations where the product is not reasonably covered, pneumatic use, or acts of God. No other person is authorized to make any other warranty on behalf of Hankscraft either during or after the applicable warranty period.

Hankscraft assumes no liability for determining the proper products and equipment or installation necessary to meet the requirements of the user of the product, and Hankscraft does not authorize others to assume such liability on its behalf.

**THE WARRANTIES AND REMEDIES HEREIN ARE EXCLUSIVE AND IN LIEU OF ANY AND ALL OTHER WARRANTIES OR REMEDIES EITHER EXPRESSED OR IMPLIED, HEREIN OR ELSEWHERE, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, NON-INFRINGEMENT OR WARRANTIES RESULTING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR FROM USAGE OF TRADE. HANKSCRAFT HEREBY DISCLAIMS ALL OTHER WARRANTIES. HANKSCRAFT’S LIABILITY SHALL NOT EXCEED THE COST OF THE PRODUCT. HANKSCRAFT IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES OF ANY KIND WHATSOEVER, INCLUDING LOSS OF PROFITS, UNDER ANY CIRCUMSTANCES AND REGARDLESS OF WHETHER HANKSCRAFT WAS AWARE OF THE POSSIBILITY OF ANY SUCH LOSS.**

# Contact Information

Thank you for choosing this elements by Hanksraft water treatment system.  
Please contact your service professional with any questions.

